David L Sedlak

List of Publications by Year
in descending order

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123 papers	13,668 citations	25034 57 h-index	20961 115 g-index
123 all docs	123 docs citations	123 times ranked	11831 citing authors

#	Article	IF	Citations
1	Challenges and Opportunities for Electrochemical Processes as Next-Generation Technologies for the Treatment of Contaminated Water. Environmental Science & Technology, 2015, 49, 11292-11302.	10.0	791
2	Pharmaceuticals, Personal Care Products, and Endocrine Disruptors in Water: Implications for the Water Industry. Environmental Engineering Science, 2003, 20, 449-469.	1.6	760
3	Factors Affecting the Yield of Oxidants from the Reaction of Nanoparticulate Zero-Valent Iron and Oxygen. Environmental Science & Technology, 2008, 42, 1262-1267.	10.0	625
4	Persistence of Perfluoroalkyl Acid Precursors in AFFF-Impacted Groundwater and Soil. Environmental Science & Technology, 2013, 47, 8187-8195.	10.0	582
5	N-Nitrosodimethylamine (NDMA) as a Drinking Water Contaminant: A Review. Environmental Engineering Science, 2003, 20, 389-404.	1.6	571
6	Formation ofN-Nitrosodimethylamine (NDMA) from Dimethylamine during Chlorination. Environmental Science & Technology, 2002, 36, 588-595.	10.0	517
7	The Technology Horizon for Photocatalytic Water Treatment: Sunrise or Sunset?. Environmental Science & Technology, 2019, 53, 2937-2947.	10.0	493
8	Oxidative Conversion as a Means of Detecting Precursors to Perfluoroalkyl Acids in Urban Runoff. Environmental Science & Technology, 2012, 46, 9342-9349.	10.0	426
9	Analysis of estrogenic hormones in municipal wastewater effluent and surface water using enzymeâ€linked immunosorbent assay and gas chromatography/tandem mass spectrometry. Environmental Toxicology and Chemistry, 2001, 20, 133-139.	4.3	357
10	In Situ Chemical Oxidation of Contaminated Groundwater by Persulfate: Decomposition by Fe(III)- and Mn(IV)-Containing Oxides and Aquifer Materials. Environmental Science & Technology, 2014, 48, 10330-10336.	10.0	345
11	The Chlorine Dilemma. Science, 2011, 331, 42-43.	12.6	338
12	A Silica-Supported Iron Oxide Catalyst Capable of Activating Hydrogen Peroxide at Neutral pH Values. Environmental Science & Technology, 2009, 43, 8930-8935.	10.0	317
13	Ligand-Enhanced Reactive Oxidant Generation by Nanoparticulate Zero-Valent Iron and Oxygen. Environmental Science & Technology, 2008, 42, 6936-6941.	10.0	304
14	Synthetic Graphene Oxide Leaf for Solar Desalination with Zero Liquid Discharge. Environmental Science & Technology, 2017, 51, 11701-11709.	10.0	270
15	A N-Nitrosodimethylamine (NDMA) precursor analysis for chlorination of water and wastewater. Water Research, 2003, 37, 3733-3741.	11.3	257
16	Oxidation of Benzene by Persulfate in the Presence of Fe(III)- and Mn(IV)-Containing Oxides: Stoichiometric Efficiency and Transformation Products. Environmental Science & Technology, 2016, 50, 890-898.	10.0	257
17	A Changing Framework for Urban Water Systems. Environmental Science & Technology, 2013, 47, 10721-10726.	10.0	208
18	Aerobic Biotransformation of Fluorotelomer Thioether Amido Sulfonate (Lodyne) in AFFF-Amended Microcosms. Environmental Science & Technology, 2015, 49, 7666-7674.	10.0	207

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19	Evidence of Remediation-Induced Alteration of Subsurface Poly- and Perfluoroalkyl Substance Distribution at a Former Firefighter Training Area. Environmental Science & Technology, 2014, 48, 6644-6652.	10.0	199
20	Oxidative Stress Induced by Zero-Valent Iron Nanoparticles and Fe(II) in Human Bronchial Epithelial Cells. Environmental Science & Technology, 2009, 43, 4555-4560.	10.0	194
21	Attenuation of Wastewater-Derived Contaminants in an Effluent-Dominated River. Environmental Science & Technology, 2006, 40, 7257-7262.	10.0	175
22	Precursors ofN-Nitrosodimethylamine in Natural Waters. Environmental Science & Technology, 2003, 37, 1331-1336.	10.0	174
23	Polyoxometalate-Enhanced Oxidation of Organic Compounds by Nanoparticulate Zero-Valent Iron and Ferrous Ion in the Presence of Oxygen. Environmental Science & Technology, 2008, 42, 4921-4926.	10.0	168
24	Use of the Chiral Pharmaceutical Propranolol to Identify Sewage Discharges into Surface Waters. Environmental Science & Technology, 2005, 39, 9244-9252.	10.0	163
25	Phototransformation of Wastewater-Derived Trace Organic Contaminants in Open-Water Unit Process Treatment Wetlands. Environmental Science & Technology, 2013, 47, 10781-10790.	10.0	143
26	Kinetics and efficiency of H2O2 activation by iron-containing minerals and aquifer materials. Water Research, 2012, 46, 6454-6462.	11.3	142
27	Engineered Infiltration Systems for Urban Stormwater Reclamation. Environmental Engineering Science, 2013, 30, 437-454.	1.6	137
28	Treatment of Aqueous Film-Forming Foam by Heat-Activated Persulfate Under Conditions Representative of In Situ Chemical Oxidation. Environmental Science & Technology, 2017, 51, 13878-13885.	10.0	133
29	Sources and Fate of Nitrosodimethylamine and its Precursors in Municipal Wastewater Treatment Plants. Water Environment Research, 2005, 77, 32-39.	2.7	132
30	Wastewater-Derived Dissolved Organic Nitrogen: Analytical Methods, Characterization, and Effectsâ€"A Review. Critical Reviews in Environmental Science and Technology, 2006, 36, 261-285.	12.8	132
31	Advanced Materials, Technologies, and Complex Systems Analyses: Emerging Opportunities to Enhance Urban Water Security. Environmental Science & Technology, 2017, 51, 10274-10281.	10.0	129
32	Chemistry of Superoxide Radical in Seawater:â€‰ Reactions with Organic Cu Complexes. Environmental Science & Technology, 2000, 34, 1036-1042.	10.0	128
33	Bioavailability and characterization of dissolved organic nitrogen and dissolved organic phosphorus in wastewater effluents. Science of the Total Environment, 2015, 511, 47-53.	8.0	126
34	Evaluation of pilot-scale biochar-amended woodchip bioreactors to remove nitrate, metals, and trace organic contaminants from urban stormwater runoff. Water Research, 2019, 154, 1-11.	11.3	125
35	Bioavailability of wastewater-derived organic nitrogen to the alga Selenastrum Capricornutum. Water Research, 2004, 38, 3189-3196.	11.3	119
36	The Innovation Deficit in Urban Water: The Need for an Integrated Perspective on Institutions, Organizations, and Technology. Environmental Engineering Science, 2013, 30, 395-408.	1.6	119

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37	Electrochemical Transformation of Trace Organic Contaminants in the Presence of Halide and Carbonate Ions. Environmental Science & Technology, 2016, 50, 10143-10152.	10.0	115
38	Modular Advanced Oxidation Process Enabled by Cathodic Hydrogen Peroxide Production. Environmental Science & Technology, 2015, 49, 7391-7399.	10.0	114
39	A Tale of Two Treatments: The Multiple Barrier Approach to Removing Chemical Contaminants During Potable Water Reuse. Accounts of Chemical Research, 2019, 52, 615-622.	15.6	112
40	Beyond User Acceptance: A Legitimacy Framework for Potable Water Reuse in California. Environmental Science & Technology, 2015, 49, 7552-7561.	10.0	108
41	Chemistry of the Superoxide Radical (O2-) in Seawater:â€‰ Reactions with Inorganic Copper Complexes. Journal of Physical Chemistry A, 1998, 102, 5693-5700.	2.5	107
42	Treatment of perfluoroalkyl acids by heat-activated persulfate under conditions representative of in situ chemical oxidation. Chemosphere, 2018, 206, 457-464.	8.2	105
43	Wastewaterâ€effluentâ€dominated streams as ecosystemâ€management tools in a drier climate. Frontiers in Ecology and the Environment, 2015, 13, 477-485.	4.0	103
44	Unexpected transformation of dissolved phenols to toxic dicarbonyls by hydroxyl radicals and UV light. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2311-2316.	7.1	96
45	Unit Process Wetlands for Removal of Trace Organic Contaminants and Pathogens from Municipal Wastewater Effluents. Environmental Engineering Science, 2013, 30, 421-436.	1.6	92
46	Superselective Removal of Lead from Water by Two-Dimensional MoS₂ Nanosheets and Layer-Stacked Membranes. Environmental Science & Technology, 2020, 54, 12602-12611.	10.0	87
47	The Role of Reactive Nitrogen Species in Sensitized Photolysis of Wastewater-Derived Trace Organic Contaminants. Environmental Science & Technology, 2019, 53, 6483-6491.	10.0	83
48	Inhibitory Effect of Dissolved Silica on H₂O₂ Decomposition by Iron(III) and Manganese(IV) Oxides: Implications for H₂O₂-Based In Situ Chemical Oxidation. Environmental Science & Technology, 2012, 46, 1055-1062.	10.0	82
49	Formation and fate of chlorination by-products in reverse osmosis desalination systems. Water Research, 2010, 44, 1616-1626.	11.3	79
50	Dissolution of mesoporous silica supports in aqueous solutions: Implications for mesoporous silica-based water treatment processes. Applied Catalysis B: Environmental, 2012, 126, 258-264.	20.2	75
51	Biotransformation of Trace Organic Contaminants in Open-Water Unit Process Treatment Wetlands. Environmental Science & Technology, 2014, 48, 5136-5144.	10.0	74
52	Sources and Environmental Fate of Strongly Complexed Nickel in Estuarine Waters:Â The Role of Ethylenediaminetetraacetate. Environmental Science & Technology, 1999, 33, 926-931.	10.0	73
53	Hydrophilic trace organic contaminants in urban stormwater: occurrence, toxicological relevance, and the need to enhance green stormwater infrastructure. Environmental Science: Water Research and Technology, 2020, 6, 15-44.	2.4	66
54	Polymer-clay composite geomedia for sorptive removal of trace organic compounds and metals in urban stormwater. Water Research, 2019, 157, 454-462.	11.3	63

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55	Co-occurrence of Photochemical and Microbiological Transformation Processes in Open-Water Unit Process Wetlands. Environmental Science & Technology, 2015, 49, 14136-14145.	10.0	62
56	Interfacial Solar Evaporation by a 3D Graphene Oxide Stalk for Highly Concentrated Brine Treatment. Environmental Science & Technology, 2021, 55, 15435-15445.	10.0	62
57	A framework for identifying characteristic odor compounds in municipal wastewater effluent. Water Research, 2012, 46, 5970-5980.	11.3	60
58	Chemisorption of Perfluorooctanoic Acid on Powdered Activated Carbon Initiated by Persulfate in Aqueous Solution. Environmental Science & Technology, 2016, 50, 7618-7624.	10.0	60
59	Oxidation of organic contaminants by manganese oxide geomedia for passive urban stormwater treatment systems. Water Research, 2016, 88, 481-491.	11.3	60
60	Chlorination of Phenols Revisited: Unexpected Formation of Î±,Î²-Unsaturated C₄-Dicarbonyl Ring Cleavage Products. Environmental Science & Technology, 2020, 54, 826-834.	10.0	60
61	Uptake of EDTA-complexed Pb, Cd and Fe by solution- and sand-cultured Brassica juncea. Plant and Soil, 2006, 286, 377-391.	3.7	58
62	Use of biodegradable dissolved organic carbon (BDOC) to assess the potential for transformation of wastewater-derived contaminants in surface waters. Water Research, 2008, 42, 2943-2952.	11.3	58
63	Nitrate Removal in Shallow, Open-Water Treatment Wetlands. Environmental Science & Technology, 2014, 48, 11512-11520.	10.0	57
64	Minimization of NDMA Formation during Chlorine Disinfection of Municipal Wastewater by Application of Pre-Formed Chloramines. Environmental Engineering Science, 2005, 22, 882-890.	1.6	54
65	Odorous Compounds in Municipal Wastewater Effluent and Potable Water Reuse Systems. Environmental Science & Technology, 2011, 45, 9347-9355.	10.0	54
66	Biotransformation of AFFF Component 6:2 Fluorotelomer Thioether Amido Sulfonate Generates 6:2 Fluorotelomer Thioether Carboxylate under Sulfate-Reducing Conditions. Environmental Science and Technology Letters, 2018, 5, 283-288.	8.7	54
67	Superior Removal of Disinfection Byproduct Precursors and Pharmaceuticals from Wastewater in a Staged Anaerobic Fluidized Membrane Bioreactor Compared to Activated Sludge. Environmental Science and Technology Letters, 2014, 1, 459-464.	8.7	53
68	Quantification of 11 thyroid hormones and associated metabolites in blood using isotope-dilution liquid chromatography tandem mass spectrometry. Analytical and Bioanalytical Chemistry, 2016, 408, 5429-5442.	3.7	51
69	The Role of Iron Coordination in the Production of Reactive Oxidants from Ferrous Iron Oxidation by Oxygen and Hydrogen Peroxide. ACS Symposium Series, 2011, , 177-197.	0.5	49
70	Sulfide-Induced Dissimilatory Nitrate Reduction to Ammonium Supports Anaerobic Ammonium Oxidation (Anammox) in an Open-Water Unit Process Wetland. Applied and Environmental Microbiology, 2017, 83, .	3.1	49
71	Iron oxide nanoparticle synthesis in aqueous and membrane systems for oxidative degradation of trichloroethylene from water. Journal of Nanoparticle Research, 2012, 14, 1.	1.9	47
72	The Fate of Estrogenic Hormones in an Engineered Treatment Wetland with Dense Macrophytes. Water Environment Research, 2005, 77, 24-31.	2.7	45

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73	The third route: Using extreme decentralization to create resilient urban water systems. Water Research, 2020, 185, 116276.	11.3	39
74	Chemical Regeneration of Manganese Oxide-Coated Sand for Oxidation of Organic Stormwater Contaminants. Environmental Science & Technology, 2018, 52, 10728-10736.	10.0	37
75	Removal of nutrients, trace organic contaminants, and bacterial indicator organisms in a demonstration-scale unit process open-water treatment wetland. Ecological Engineering, 2017, 109, 76-83.	3.6	36
76	Effects of Aqueous Film-Forming Foams (AFFFs) on Trichloroethene (TCE) Dechlorination by a Dehalococcoides mccartyi-Containing Microbial Community. Environmental Science & Technology, 2016, 50, 3352-3361.	10.0	35
77	Barriers to Innovation in Urban Wastewater Utilities: Attitudes of Managers in California. Environmental Management, 2016, 57, 1204-1216.	2.7	34
78	Effect of metal complexation on the degradation of dithiocarbamate fungicides. Environmental Toxicology and Chemistry, 2000, 19, 820-826.	4.3	33
79	A mixed-methods approach to strategic planning for multi-benefit regional water infrastructure. Journal of Environmental Management, 2019, 233, 218-237.	7.8	32
80	Rapid chiral separation of atenolol, metoprolol, propranolol and the zwitterionic metoprolol acid using supercritical fluid chromatographyâ€“tandem mass spectrometry â€“ Application to wetland microcosms. Journal of Chromatography A, 2015, 1409, 251-258.	3.7	29
81	Impact of Iron Amendment on Net Methylmercury Export from Tidal Wetland Microcosms. Environmental Science & Technology, 2010, 44, 7659-7665.	10.0	28
82	Impact of Peroxymonocarbonate on the Transformation of Organic Contaminants during Hydrogen Peroxide in Situ Chemical Oxidation. Environmental Science and Technology Letters, 2019, 6, 781-786.	8.7	28
83	Ubiquitous Production of Organosulfates during Treatment of Organic Contaminants with Sulfate Radicals. Environmental Science and Technology Letters, 2021, 8, 574-580.	8.7	27
84	Urban Water-Supply Reinvention. Daedalus, 2015, 144, 72-82.	1.8	22
85	Trace Element Removal in Distributed Drinking Water Treatment Systems by Cathodic H₂O₂ Production and UV Photolysis. Environmental Science & Technology, 2018, 52, 195-204.	10.0	22
86	Towards a New Paradigm of Urban Water Infrastructure: Identifying Goals and Strategies to Support Multi-Benefit Municipal Wastewater Treatment. Water (Switzerland), 2018, 10, 1127.	2.7	22
87	Ring-Cleavage Products Produced during the Initial Phase of Oxidative Treatment of Alkyl-Substituted Aromatic Compounds. Environmental Science & Technology, 2020, 54, 8352-8361.	10.0	21
88	The third route: A techno-economic evaluation of extreme water and wastewater decentralization. Water Research, 2022, 218, 118408.	11.3	21
89	Formation and Fate of Carbonyls in Potable Water Reuse Systems. Environmental Science & Technology, 2020, 54, 10895-10903.	10.0	20
90	The Unintended Consequences of the Reverse Osmosis Revolution. Environmental Science & Technology, 2019, 53, 3999-4000.	10.0	19

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91	Sulfur Cycle in a Wetland Microcosm: Extended ³⁴S-Stable Isotope Analysis and Mass Balance. Environmental Science & Technology, 2020, 54, 5498-5508.	10.0	19
92	Transformation of Trace Organic Contaminants from Reverse Osmosis Concentrate by Open-Water Unit-Process Wetlands with and without Ozone Pretreatment. Environmental Science & Technology, 2020, 54, 16176-16185.	10.0	17
93	Sorption of recalcitrant phosphonates in reverse osmosis concentrates and wastewater effluents â€“ influence of metal ions. Water Science and Technology, 2021, 83, 934-947.	2.5	17
94	Nitrate removal from reverse osmosis concentrate in pilot-scale open-water unit process wetlands. Environmental Science: Water Research and Technology, 2021, 7, 650-661.	2.4	17
95	Reactions of Î±,Î²-Unsaturated Carbonyls with Free Chlorine, Free Bromine, and Combined Chlorine. Environmental Science & Technology, 2021, 55, 3305-3312.	10.0	16
96	Enabling Water Reuse by Treatment of Reverse Osmosis Concentrate: The Promise of Constructed Wetlands. ACS Environmental Au, 2021, 1, 7-17.	7.0	16
97	ANALYSIS OF ESTROGENIC HORMONES IN MUNICIPAL WASTEWATER EFFLUENT AND SURFACE WATER USING ENZYME-LINKED IMMUNOSORBENT ASSAY AND GAS CHROMATOGRAPHY/TANDEM MASS SPECTROMETRY. Environmental Toxicology and Chemistry, 2001, 20, 133.	4.3	16
98	Under-reporting Potential of Perfluorooctanesulfonic Acid (PFOS) under High-Ionic Strength Conditions. Environmental Science and Technology Letters, 2021, 8, 1032-1037.	8.7	15
99	Identification of transformation products from Î²â€blocking agents formed in wetland microcosms using LCâ€Qâ€ToF. Journal of Mass Spectrometry, 2016, 51, 207-218.	1.6	13
100	Establishment and convergence of photosynthetic microbial biomats in shallow unit process open-water wetlands. Water Research, 2018, 133, 132-141.	11.3	12
101	Simplified Process to Determine Rate Constants for Sunlight-Mediated Removal of Trace Organic and Microbial Contaminants in Unit Process Open-Water Treatment Wetlands. Environmental Engineering Science, 2019, 36, 43-59.	1.6	12
102	The horizontal levee: a multi-benefit nature-based treatment system that improves water quality and protects coastal levees from the effects of sea level rise. Water Research X, 2020, 7, 100052.	6.1	12
103	The use of manganese oxide-coated sand for the removal of trace metal ions from stormwater. Environmental Science: Water Research and Technology, 2020, 6, 593-603.	2.4	11
104	Fate of Dissolved Nitrogen in a Horizontal Levee: Seasonal Fluctuations in Nitrate Removal Processes. Environmental Science & Technology, 2022, 56, 2770-2782.	10.0	10
105	Response to Comment on â€œFactors Affecting the Yield of Oxidants from the Reaction of Nanoparticulate Zero-Valent Iron and Oxygenâ€• Environmental Science & Technology, 2008, 42, 5378-5378.	10.0	9
106	Use of stable nitrogen isotopes to track plant uptake of nitrogen in a nature-based treatment system. Water Research X, 2020, 9, 100070.	6.1	9
107	Animal Manure Separation Technologies Diminish the Environmental Burden of Steroid Hormones. Environmental Science and Technology Letters, 2015, 2, 133-137.	8.7	8
108	Regenerated Manganese-Oxide Coated Sands: The Role of Mineral Phase in Organic Contaminant Reactivity. Environmental Science & Technology, 2021, 55, 5282-5290.	10.0	8

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109	An electrochemical advanced oxidation process for the treatment of urban stormwater. Water Research X, 2021, 13, 100127.	6.1	8
110	Protecting the sewershed. Science, 2020, 369, 1429-1430.	12.6	6
111	Aerobic BTEX biodegradation increases yield of perfluoroalkyl carboxylic acids from biotransformation of a polyfluoroalkyl surfactant, 6:2 FtTAoS. Environmental Sciences: Processes and Impacts, 2022, 24, 439-446.	3.5	6
112	Membrane-Assisted Electrochlorination for Zero-Chemical-Input Point-of-Use Drinking Water Disinfection. ACS ES&T Engineering, 2022, 2, 1933-1941.	7.6	4
113	Introduction: Reinventing Urban Water Infrastructure. Environmental Engineering Science, 2013, 30, 393-394.	1.6	3
114	The Foodâ€“Environment Nexus. Environmental Science & Technology, 2019, 53, 6597-6598.	10.0	3
115	Response to Comment on â€œPolyoxometalate-Enhanced Oxidation of Organic Compounds by Nanoparticulate Zero-Valent Iron and Ferrous Ion in the Presence of Oxygenâ€• Environmental Science & Technology, 2008, 42, 8169-8169.	10.0	2
116	EFFECT OF METAL COMPLEXATION ON THE DEGRADATION OF DITHIOCARBAMATE FUNGICIDES. Environmental Toxicology and Chemistry, 2000, 19, 820.	4.3	2
117	Environmental Science & Technology Presents the 2019 Reviewer Awards. Environmental Science & Technology, 2019, 53, 12151-12152.	10.0	1
118	Quantification of 11 thyroid hormones and associated metabolites in blood using isotope-dilution liquid chromatography tandem mass spectrometry. , 2016, 408, 5429.		1
119	Environmental Science & Technology Presents the 2017 Reviewer Awards. Environmental Science & Technology, 2017, 51, 12047-12048.	10.0	0
120	ES&Tâ€™s Best Papers of 2017. Environmental Science & Technology, 2018, 52, 3833-3834.	10.0	0
121	Environmental Science & Technology Presents the 2018 Reviewer Awards. Environmental Science & Technology, 2018, 52, 11971-11972.	10.0	0
122	ES&Tâ€™s Best Papers of 2018. Environmental Science & Technology, 2019, 53, 3343-3344.	10.0	0
123	Better Science by Beating Back Bias. Environmental Science and Technology Letters, 2019, 6, 112-113.	8.7	0